Electronic Supplementary Material (ESI) for Journal of Materials Chemistry B.

Tannic acid–Poloxamer Self-Assembled Nanoparticles for Advanced Atherosclerosis Therapy by Regulation of Macrophage Polarization

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Supporting Information

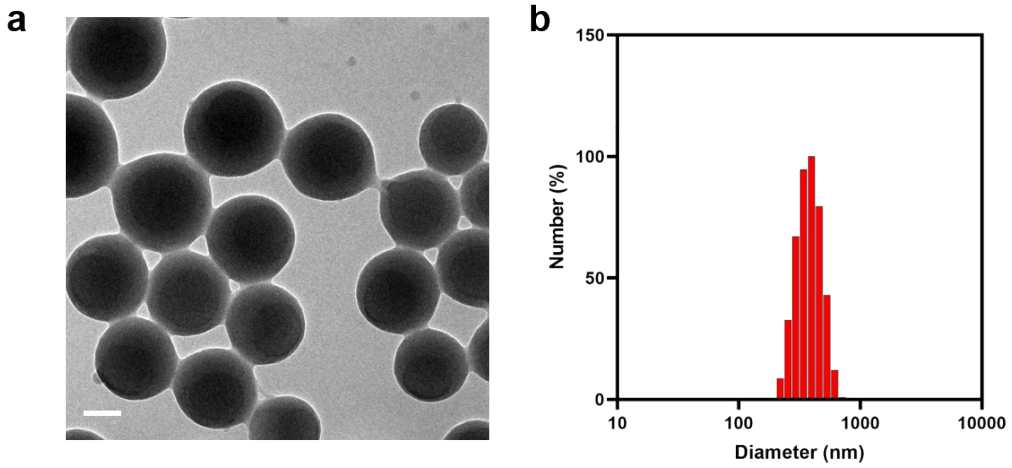

Fig. S1 TEM images (a) and hydrodynamic size (b) distribution graphs of TPNP@IR820. Scale bar: 200 nm.

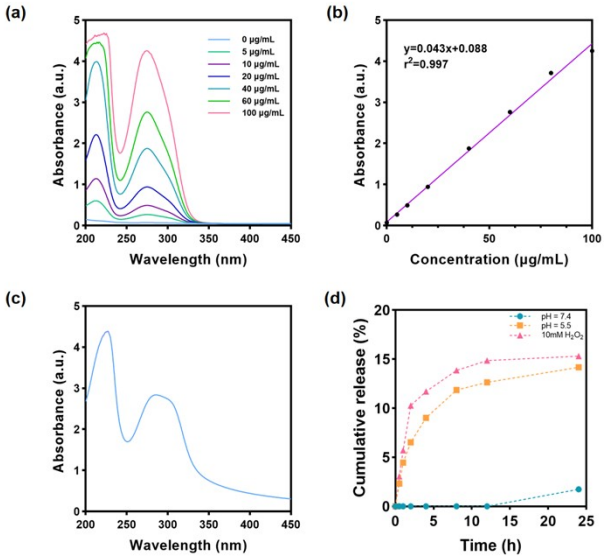

Fig. S2 (a) UV-VIS spectra of different concentration of TA in DI water. (b) The linear regression curve of TA in DI water. (c) The UV-VIS spectrum of TPNP (100 μg/mL) in DI water. (d) In vitro TA release profiles from TPNP in different buffer during 24 hours.

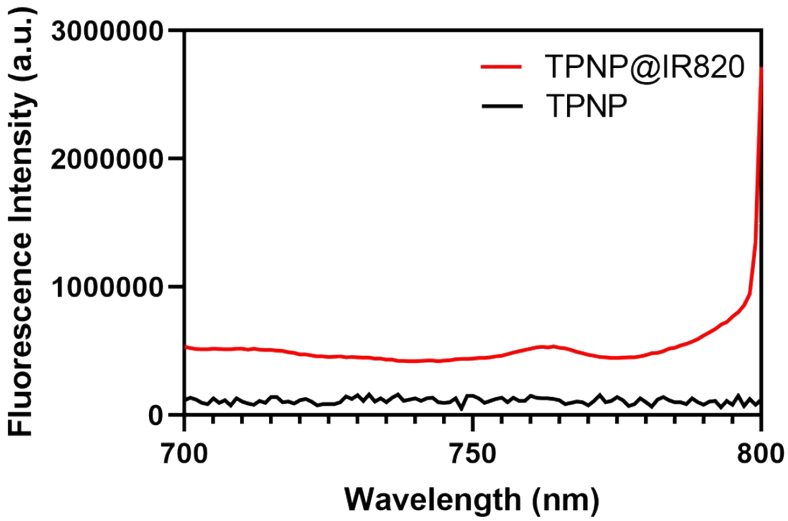

Fig. S3 The fluorescence spectrum of the TPNP@IR820 and TPNP

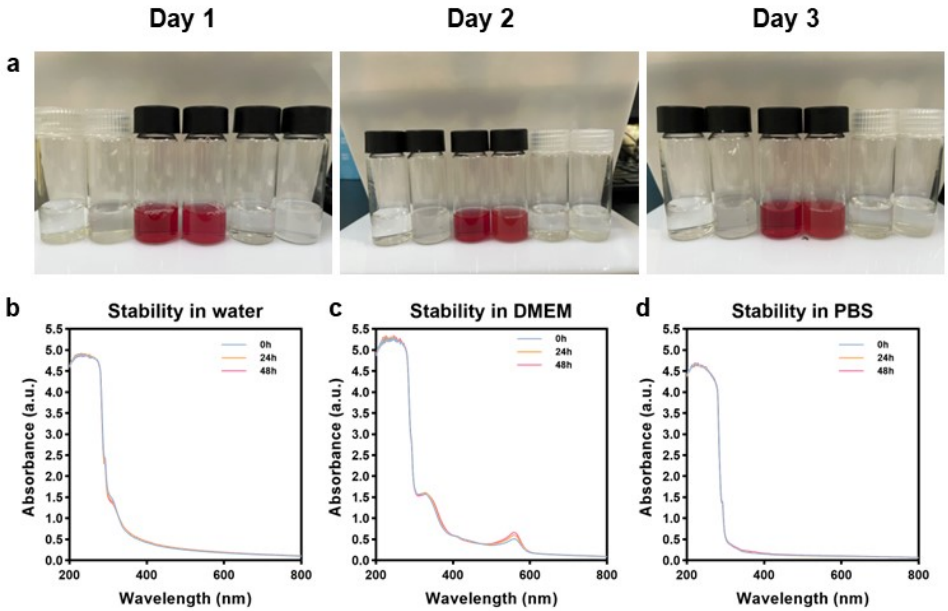

Fig. S4 (a) Photos of TPNP in water, DMEM culture medium and PBS during Day1 to Day3. (b) UV-VIS spectra of TPNP in water, DMEM culture medium and PBS during Day1 to Day3.

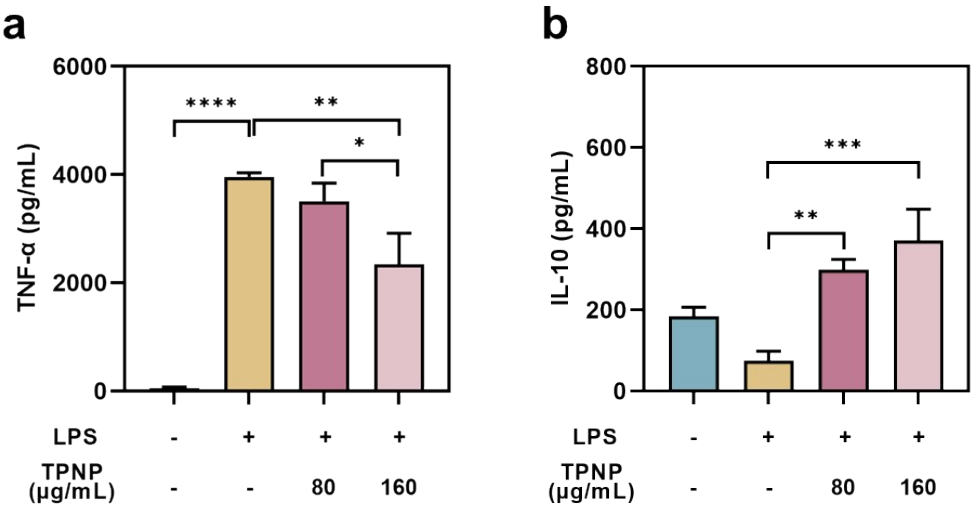

Fig. S5 Detection of TNF-α (a, n = 4), and IL-10 (b, n = 3) secretion in the supernatant of RAW 264.7 cells with different interventions by ELISA. All of the data are presented as mean ± s.d. *p < 0.05, **p < 0.01, ***p < 0.001, and ****p < 0.001.

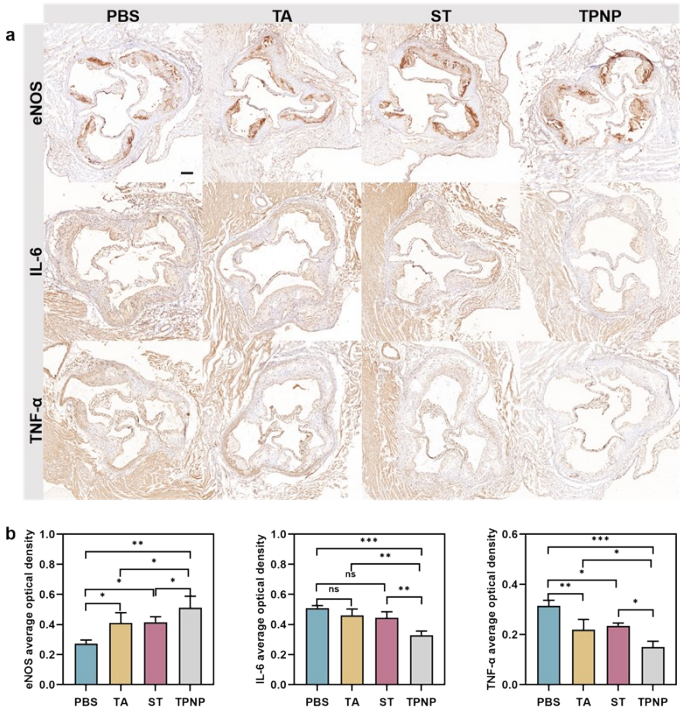

Fig. S6 (a) Representative immunohistochemistry photographs of the aorta arch sections stained by eNOS, IL-6 and TNF-α antibody in ApoE$^{-/-}$ mice administered with PBS, Tannic acid, simvastatin and TPNP. Scale bar: 200 μm. (b) Quantification of eNOS, IL-6 and TNF-α

staining areas within the vessels (n = 3 biologically independent animals per group).

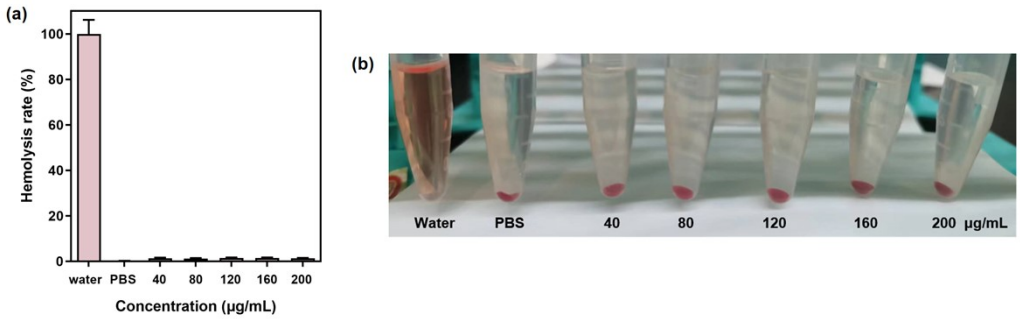

Fig. S7 (a) Hemolysis percentage and corresponding pictures (b) of DI water, PBS and different concentration of TPNP.

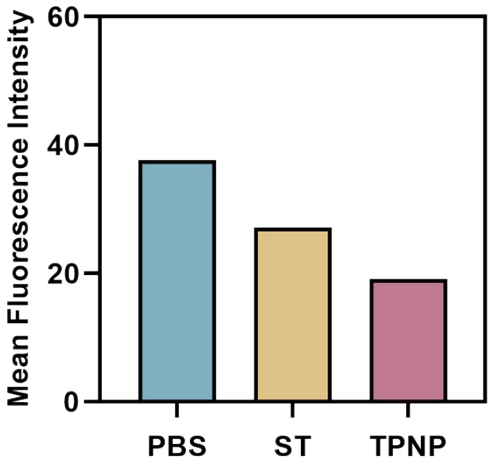

Fig. S8 Quantitative analysis of DHE staining of the abdominal aorta sections in ApoE$^{-/-}$ mice administered with PBS, simvastatin and TPNP.

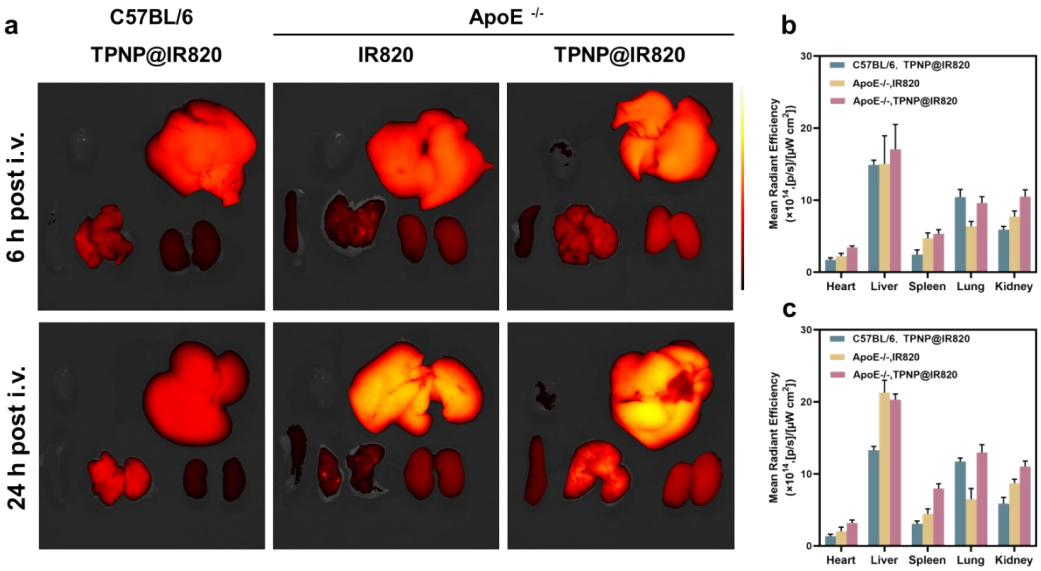

Fig. S9 (a) Representative ex vivo fluorescent images of the heart, liver, spleen, lung and kidney harvested from C57BL/6 mice injected with TPNP@IR820 and ApoE$^{-/-}$ mice injected with IR820 or TPNP@IR820 at 6 h (above) and 24 h (below) post-injection, respectively. The minimal and maximal values of the color bar at right are 0.5 and 4.0 × 10^{14} [p/s/cm^2 /sr]/[μW/cm^2], respectively. Quantitative analyses was performed for total radiant efficiency of isolated organs from each group at 6 h post-injection (b) and 24 h post-injection (c) (n = 4). All of the data are presented as mean ± s.d.